

704 841 7744

844-627-3630

TELEPHONE -  
QUOTATION - MESSAGE  
ORDER

R.S.H. CO.  
ORDER NO.

DATE 3/27

COPY TO: \_\_\_\_\_

FILE REF: \_\_\_\_\_

**ROBERT S. HUDGINS CO.**

FROM: PAM SNODGRASS / MILLER

WITH: Water Section

ADDRESS: BLDG 670

CITY: Camp Lejeune NC

PHONE: 919 451-1081

PRINCIPAL OR REF.: VALMATIC

CUSTOMER'S P.O. NO.: \_\_\_\_\_

SHIP OR MAIL TO \_\_\_\_\_

SHIP VIA: \_\_\_\_\_ BEFORE: \_\_\_\_\_

	LIST PRICE	DISC./MULT.	NET PRICE
<u>Pam / Stan,</u>			
<u>Here is that valve/actuator replacement package we have been working on. Talk to the technician and see which option is best. Both include Valmatic 580X1 4" plug valve sized for 50 ft lbs torque, 110 or 230 V single phase 60Hz motor.</u>			
<u>A) THROTTLE VALVE AND ACTUATOR WITH 4-20 mA CURRENT TRANSMITTER</u>			<u>3,953<sup>35</sup></u>
<u>B) THROTTLE VALVE AND ACTUATOR WITH POSITION POTENTIOMETER ONLY</u>			<u>3,111<sup>98</sup></u>
<u>Delivery: 10-14 wks ARO</u>			

2011 11 17  
2011 11 17

**FAX  
MEMO****Robert S. Hudgins Co.**

PH) 704-366-4887

FAX) 704-366-5192

TO: *Mack Frayelli*FROM: *Robert Hudgins*

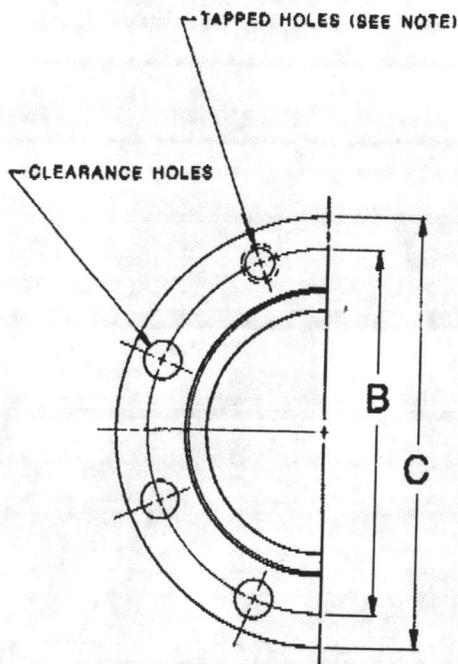
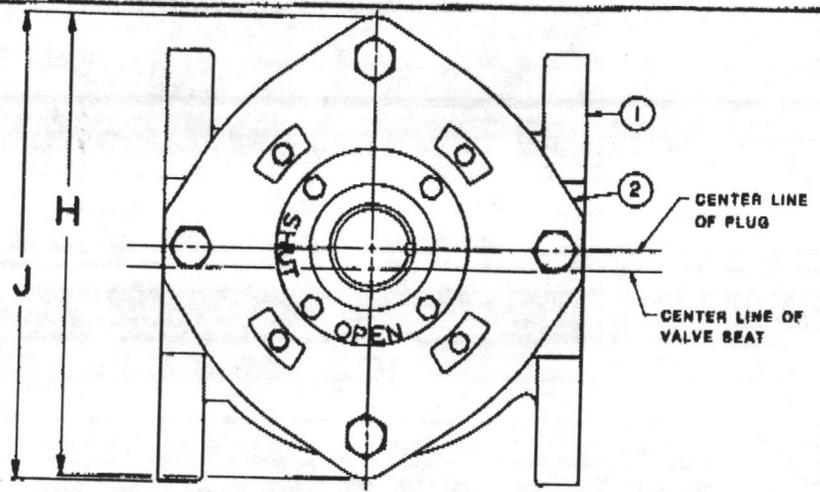
ATTN:

REF: *Electric  
plug valve*DATE: *5/14/90*No. of pages including cover: *8 1/2*

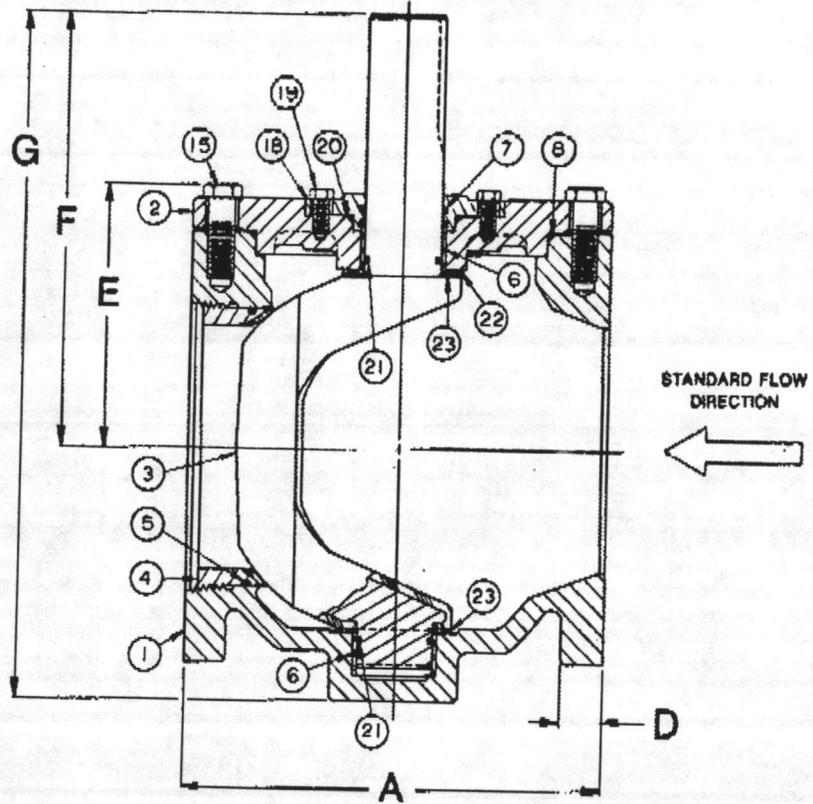
*Mack: This should be enough to do  
something with. Call if I can help further.*

*Robert Hudgins*





WORKING PRESSURE  
175 P.S.I.  
TEST PRESSURE  
350 P.S.I.



NOTE: TWO TOP HOLES OF EACH FLANGE ARE DRILLED AND TAPPED FOR 4", 6", AND 8" VALVE SIZES  
FOUR TOP HOLES OF EACH FLANGE ARE DRILLED AND TAPPED FOR 10" AND 12" VALVE SIZES

ANSI CLASS 125

VALVE SIZE	MODEL NO.	A	B	C	D	E	F	G	H	J	BOLT SIZE	NO. OF BOLTS
4	5804	9	7 1/2	9	15/16	5 1/4	10 5/8	15 1/2	9	9 1/4	5/8	8
6	5806	10 1/2	9 1/2	11	1	6 3/8	11 3/4	17 13/16	10 1/2	11 1/8	3/4	8
8	5808	11 1/2	11 3/4	13 1/2	1 1/8	7 5/16	12 3/4	19 1/16	11 1/2	13 3/4	3/4	8
10	5810	13	14 1/4	16	1 3/16	9 1/4	14 3/8	23 5/16	15 1/2	16 1/4	7/8	12
12	5812	14	17	19	1 1/4	10 7/16	15 9/16	25 15/16	16 1/4	19	7/8	12

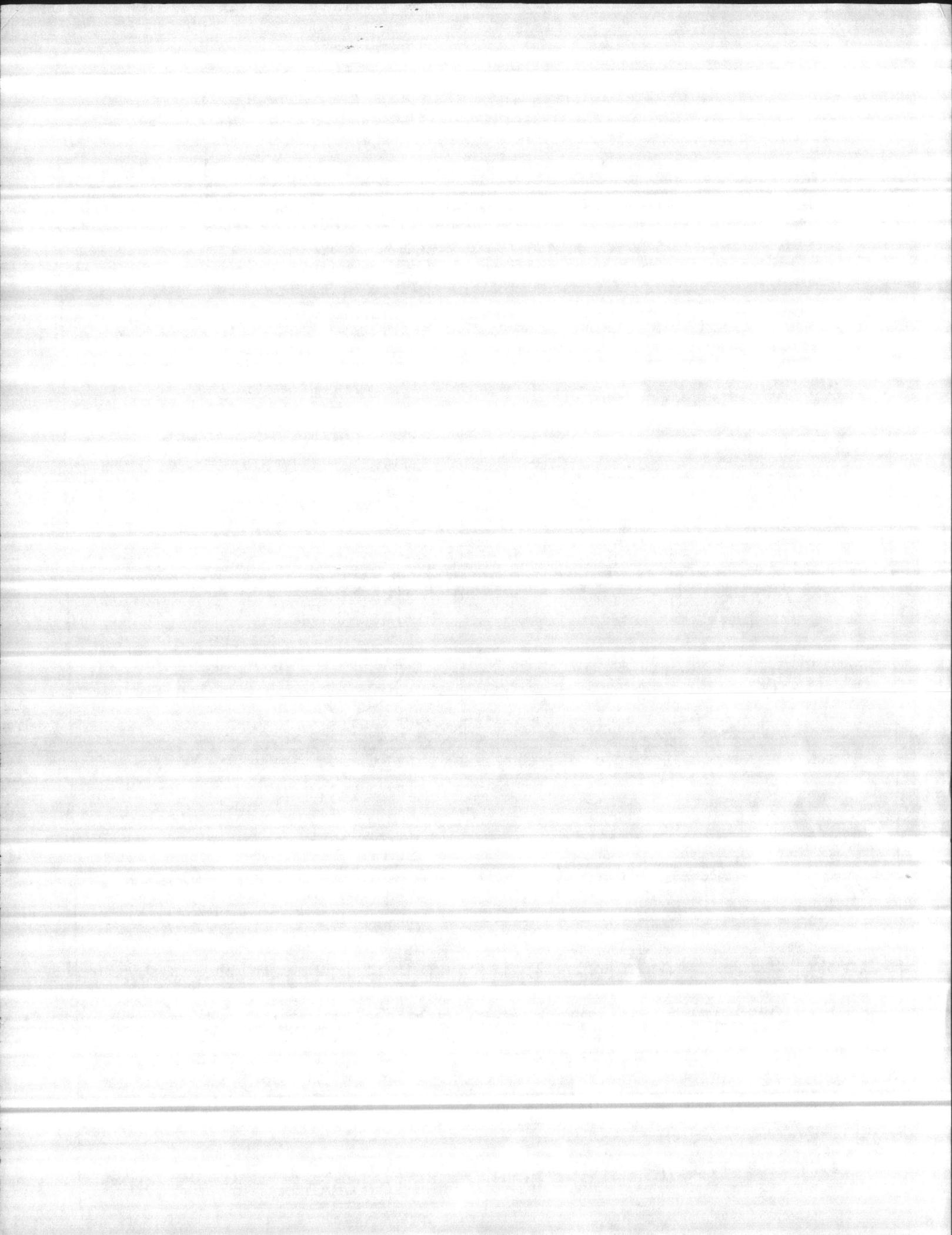
ANSI CLASS 125 CAM-CENTRIC FLANGED PLUG VALVE - 4" THRU 12"

DATE 5-1-87

**VAT-MATIC** VALVE and MANUFACTURING CORPORATION

DRWG. NO.

VM-5804



Flanged per ANSI B16.1 Class 125 and  
Mechanical Joint per ANSI 21.11/AWWA C111 Cam-Centric Plug Valve  
Standard Materials of Construction

<u>Part No.</u>	<u>Part Name</u>	<u>Material</u>
1	Body	Cast Iron ASTM A-126, Class B
2	Cover	Cast Iron ASTM A-126, Class B
3	Plug	Cast Iron ASTM A-126, Class B and Buna-N 70 Durometer
4	Seat Ring	Cast Iron ASTM A-126, Class B with Welded Nickel Facing
5	O-Ring	Buna-N 70 Durometer
6	Bearings	Stainless Steel T304, ASTM A276
7	O-Ring	Buna-N 70 Durometer
8	O-Ring	Buna-N 70 Durometer
9*	Brake	Cast Iron ASTM A-126, Class B
10*	Brake Retaining Bolt	Carbon Steel ASTM A307, Grade A
11*	Brake Adjustment Bolt	Carbon Steel ASTM A307, Grade A
12*	Square Nut	Steel - Zinc Plated
13*	Socket Set Screw	Steel - Zinc Plated
14*	Jam Nut	Steel - Zinc Plated
15	Cover Bolt	Carbon Steel ASTM A307, Grade A
16*	Operating Nut	Cast Iron ASTM A-126, Class B
17*	Spring Pin	Carbon Steel
18	Cartridge	Bronze ASTM B-584, Copper Alloy No. 867
19	Cartridge Bolt	Carbon Steel ASTM A307, Grade A
20	O-Ring	Buna-N 70 Durometer
21	O-Ring	Buna-N 70 Durometer
22	Thrust Bearing	Teflon
23	Thrust Bearing	Stainless Steel T304, ASTM A276
24	Memory Stop	Carbon Steel
25	Mechanical Stop	Carbon Steel
26	Adjustment Bolt	Carbon Steel ASTM A307, Grade A
27	Washer	Steel - Zinc Plated
28	Lock Washer	Steel - Zinc Plated

\*Operating nut and brake not furnished on 10" through 24" valve sizes or when worm gear or other actuators are supplied.

CAM-CENTRIC PLUG VALVE STANDARD MATERIALS OF CONSTRUCTION

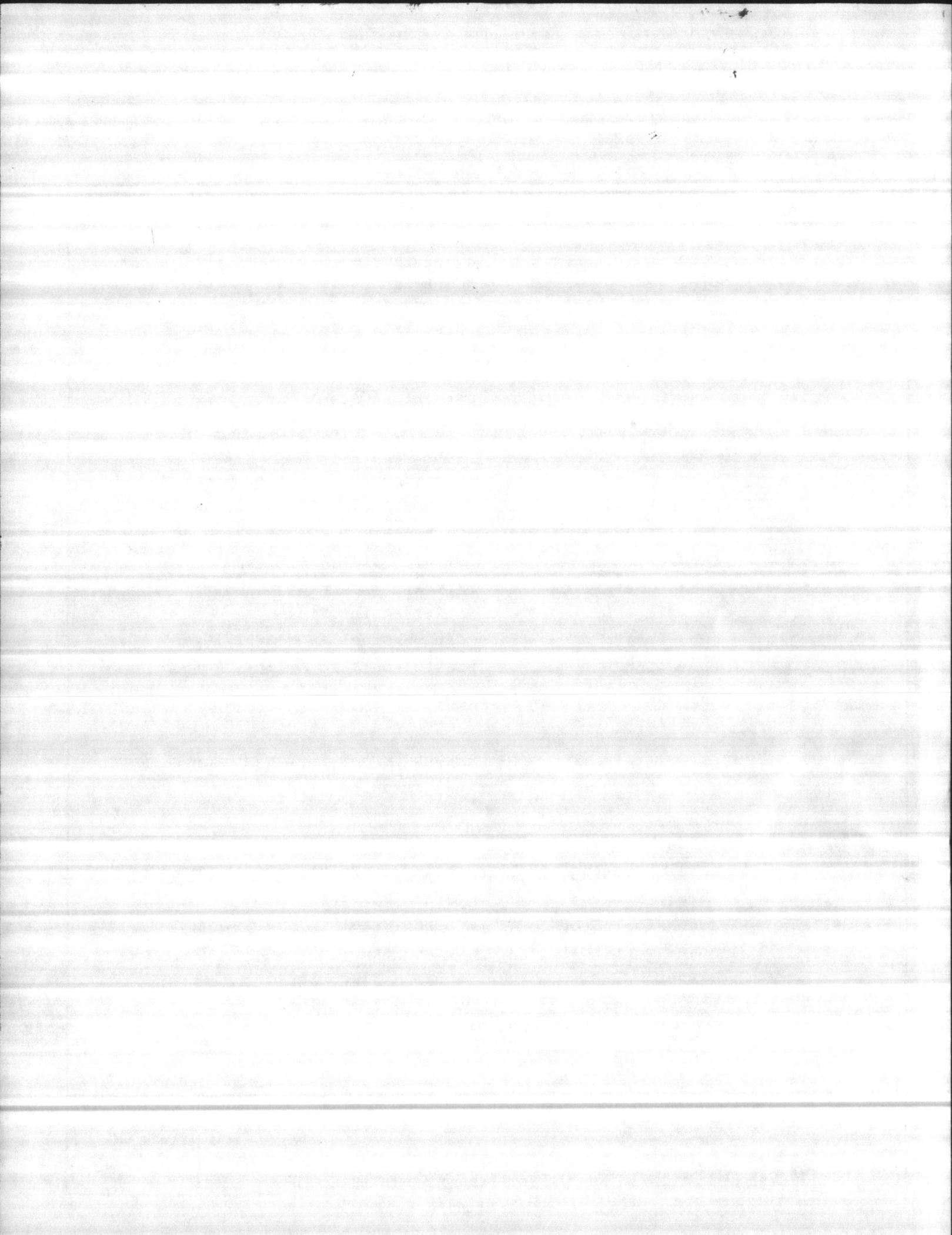
DATE  
10-14-87

**VAL-MATIC**

VALVE AND MANUFACTURING CORP.

DRWG. NO.

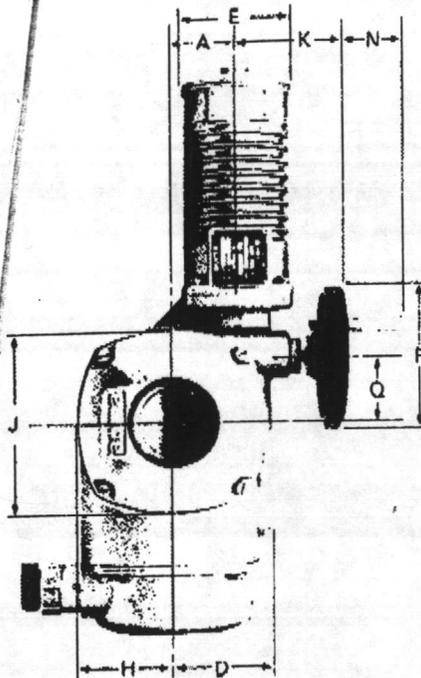
VM-5803N-M



# Technical Data

MODEL	RATED TORQUE (ft-lbs)	OPERATING TIME FOR 90° - (sec)		HANDWHEEL TURNS	MAXIMUM VALVE SHAFT ACCEPTANCE		WEIGHT (lbs)
		THREE PHASE MOTOR	SINGLE PHASE MOTOR		DIAMETER (in)	LENGTH (in)	
SG 05	110	7 and 18	5 to 60	68	1	2 1/4	40
SG 07	220	7 and 26	10 to 80	58	1	2 1/4	40
SG 10	440	26 and 60	11 to 90	108	1 1/2	3 1/8	50
SG 12	880	26 and 50	22 to 180	110	2	4	64

Consult factory for additional three phase operating times.



Dimensions

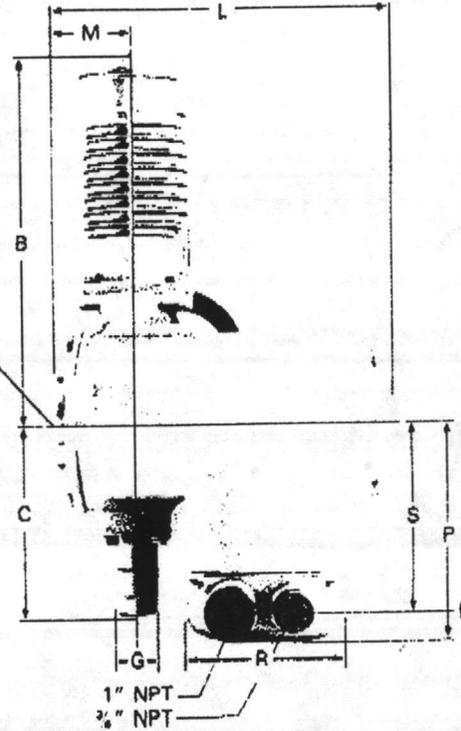
**Mounting Dimensions**

**Standard:**

- SG05 4 threaded holes 1/4-20 UNC on 1.97 in. bolt circle straddling centerline.
- SG07 4 threaded holes 5/16-18 UNC on 2.75 in. bolt circle straddling centerline.
- SG10 4 threaded holes 7/16-14 UNC on 4.0 in. bolt circle straddling centerline.
- SG12 4 threaded holes 1/2-13 UNC on 4.92 in. bolt circle straddling centerline.

**Optional:**

- SG05 Bolt circle diameters from 2.0 to 5.5 in. straddling centerline and 2.0 to 3.0 in. on centerline.
- SG07 Bolt circle diameters from 2.0 to 5.5 in. straddling centerline and 2.0 to 3.0 in. on centerline.
- SG10 Bolt circle diameters from 2.66 to 5.56 in. straddling centerline and 2.66 to 4.06 in. on centerline.
- SG12 Bolt circle diameters from 3.45 to 6.8 in. straddling centerline and 3.45 to 5.0 in. on centerline.



MODEL	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S
SG 05	1.6	11.8	5.3	3.6	4.0	5.0	1.6	2.3	4.6	3.6	10.5	2.0	2.4	5.9	1.8	4.6	4.8
SG 07	1.6	11.8	5.3	3.6	4.0	5.0	1.6	2.3	4.6	3.8	10.5	2.0	2.4	5.9	1.8	4.6	4.8
SG 10	2.5	12.2	6.7	4.6	4.0	5.0	1.6	3.0	5.9	4.0	11.0	2.2	2.4	7.4	2.2	5.9	5.7
SG 12	3.2	12.2	7.7	5.2	4.0	5.5	1.6	3.0	5.9	4.3	12.0	2.8	2.4	7.4	2.2	5.9	5.7

## Electrical Data

MODEL	OPERATING TIME (Sec)		MOTOR RPM		HP		FLA		LRA	
	SINGLE PHASE	THREE PHASE	SINGLE PHASE	THREE PHASE						
					115/1/60	460/3/60	115/1/60	460/3/60	115/1/60	460/3/60
SG 05	5 to 20	7	Variable Speed	3600	1/5	1/12	3.5	0.9	11.0	4.5
	15 to 60	18		1800	1/10	1/24	1.8	0.7	7.5	3.5
SG 07	10 to 40	7	Variable Speed	3600	1/5	1/6	3.5	1.8	11.0	9.0
	20 to 80	26		1800	1/10	1/24	1.8	0.7	7.5	3.5
SG 10	11 to 90	26	Variable Speed	3600	1/5	1/12	3.5	0.9	11.0	4.5
		50		1800		1/24		0.7		3.5
SG 12	22 to 180	26	Variable Speed	3600	1/5	1/6	3.5	1.8	11.0	9.0
		50		1800		1/12		0.9		4.5

Other voltages available: 230/3/60, 380/3/50, 220/1/60, 220/1/50

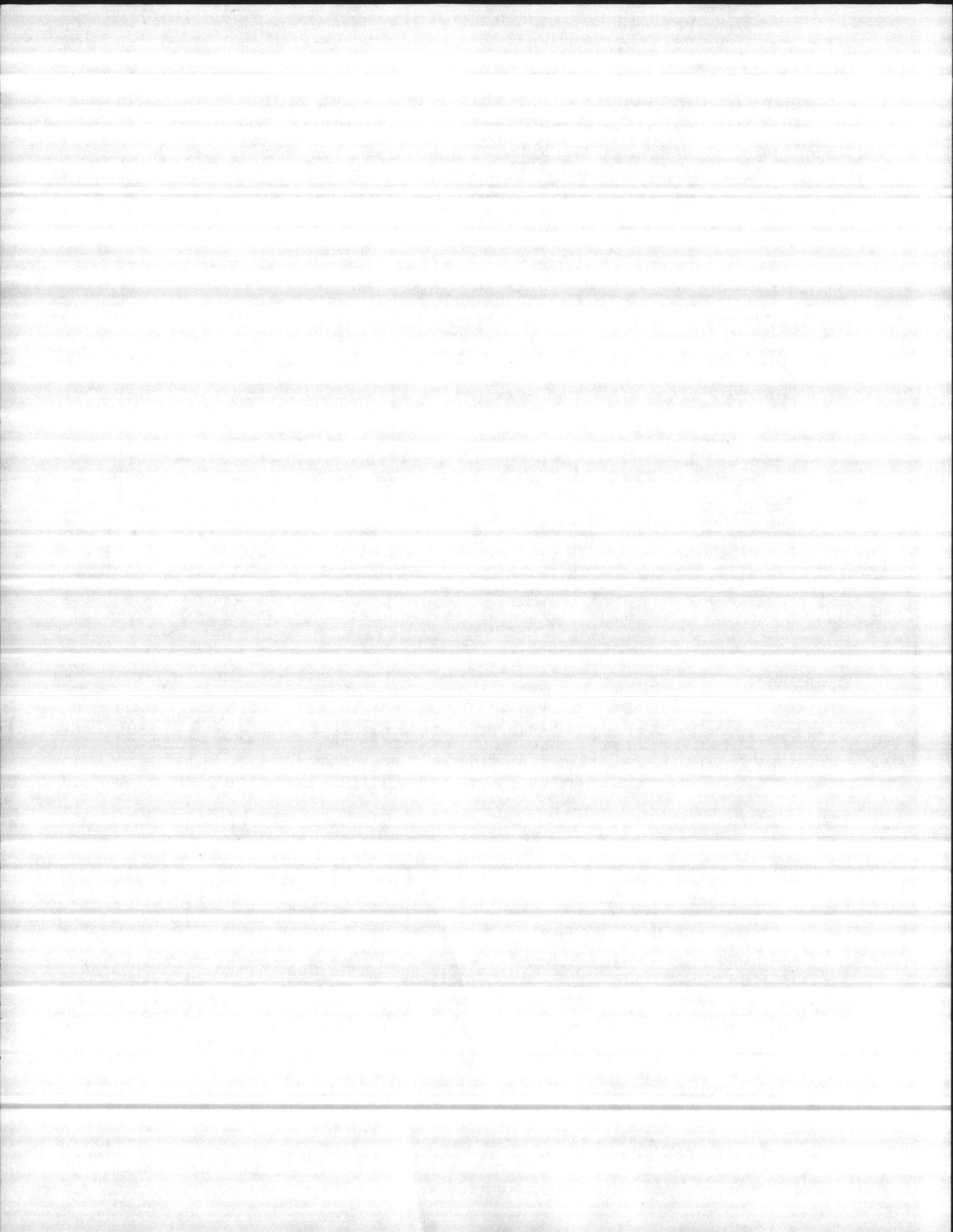
## Operating Temperatures

TYPE	TEMPERATURE RANGE
SG	-20° F to +175° F
SGL*	-60° F to +140° F
SGH*	+32° F to +250° F

\*Three Phase Only -- No integral controls.

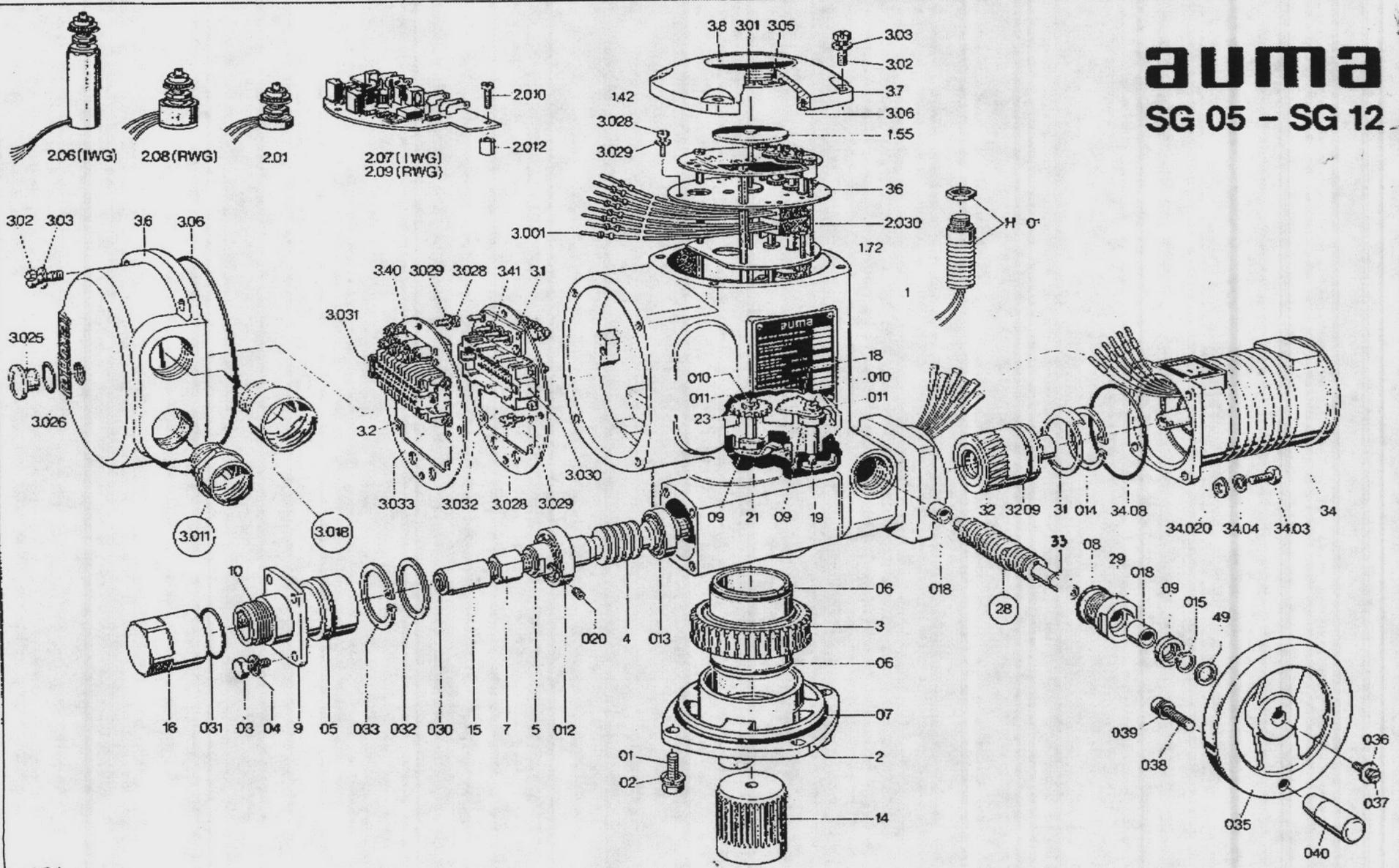
**AUMA ACTUATORS, INC.**  
 4 Zesta Drive  
 Pittsburgh, Pennsylvania 15205

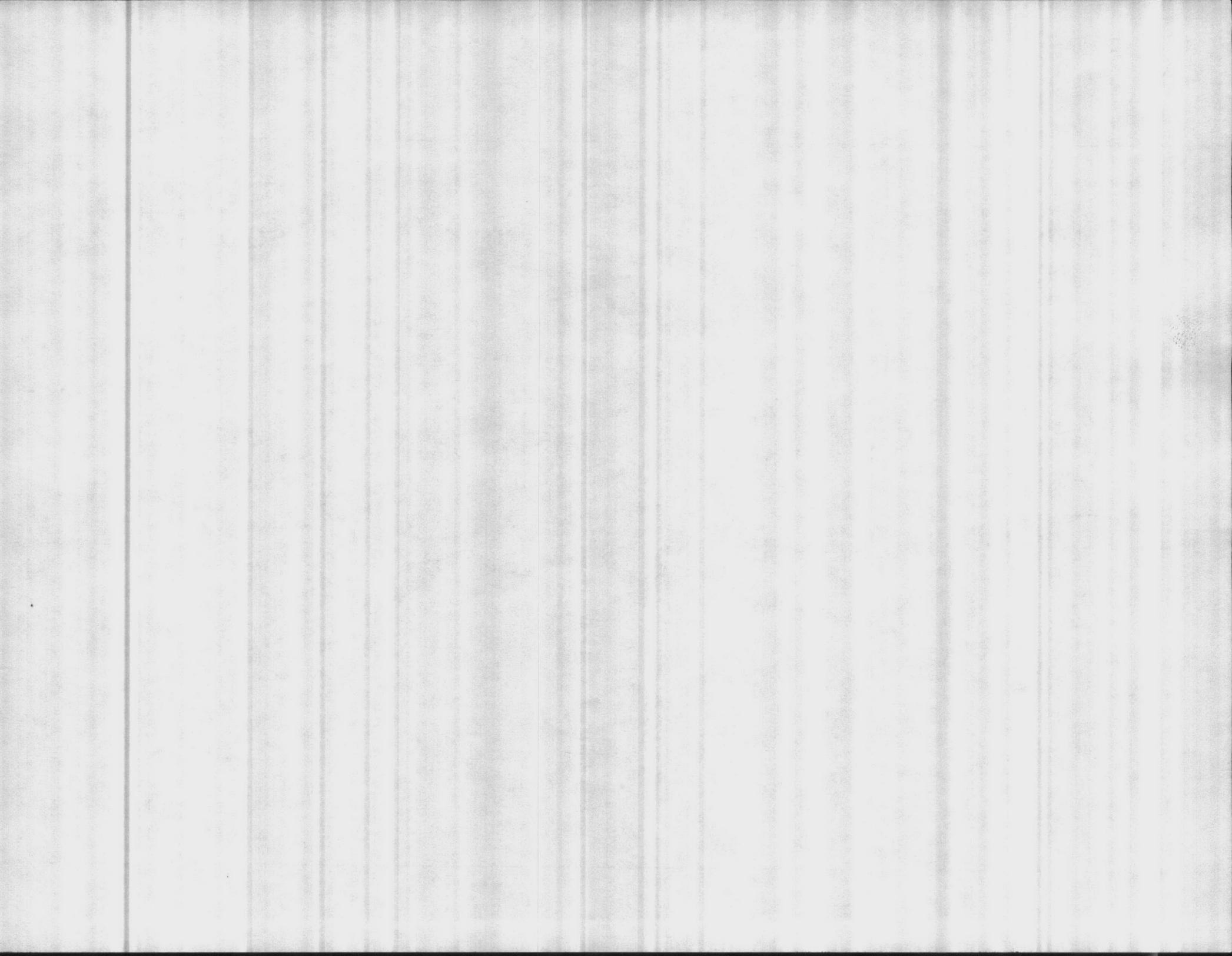
(412) 787-1340  
 TWX 510-697-4043

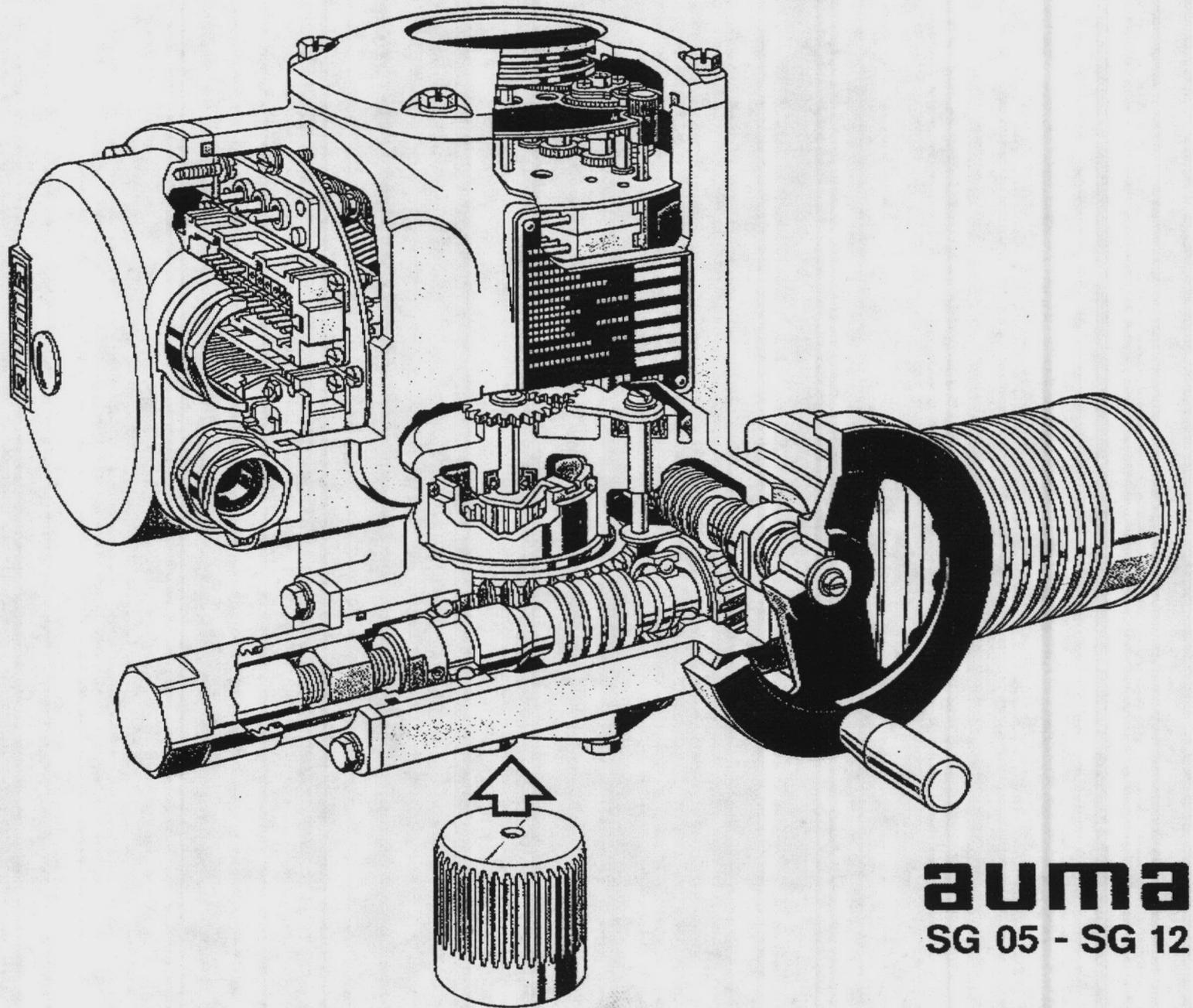


# auma

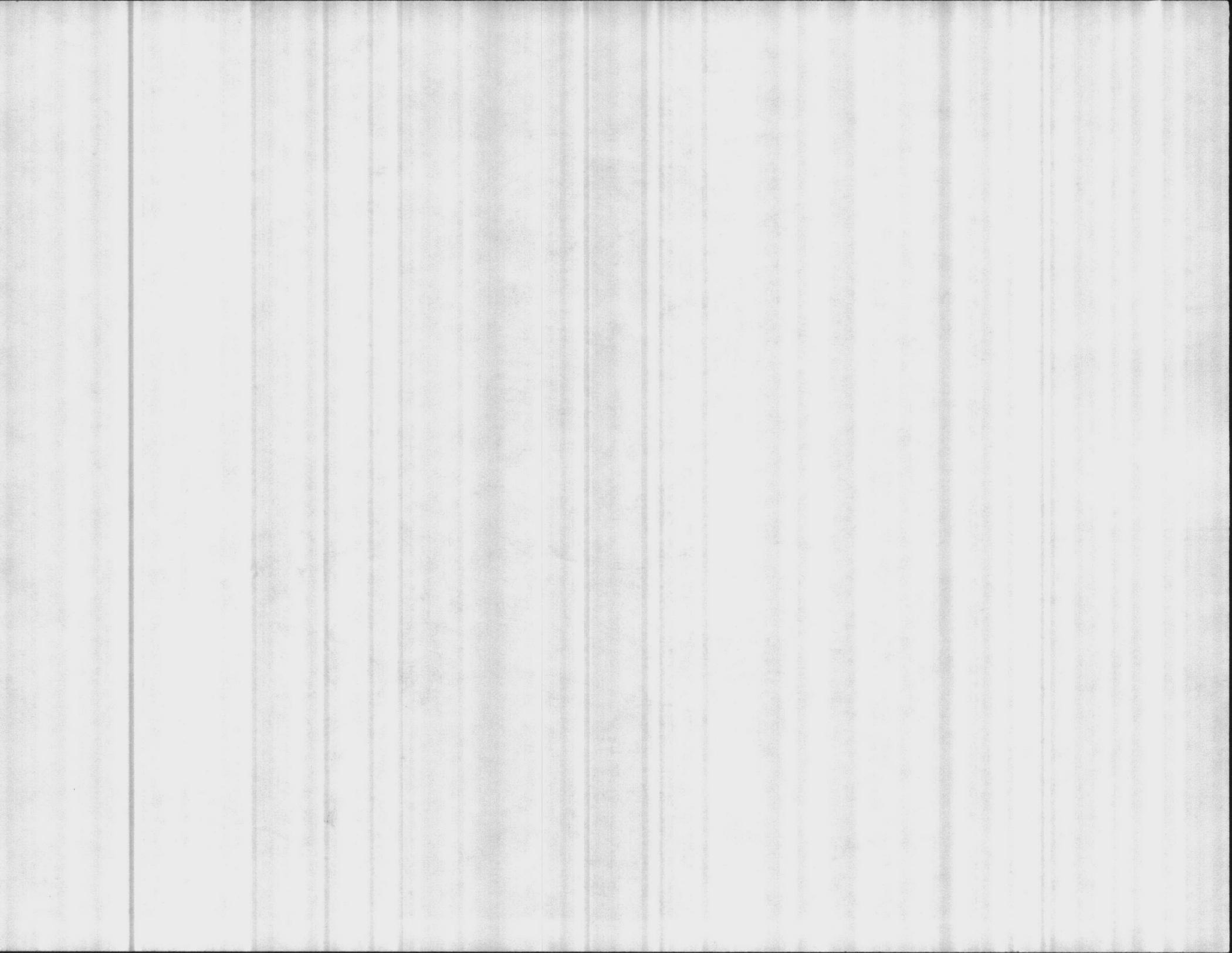
## SG 05 - SG 12







**auma**  
SG 05 - SG 12



**auma®****Quarter-Turn Actuator****Model Numbers:****SG 05, SG 07, SG 10, SG 12**

## Product Description

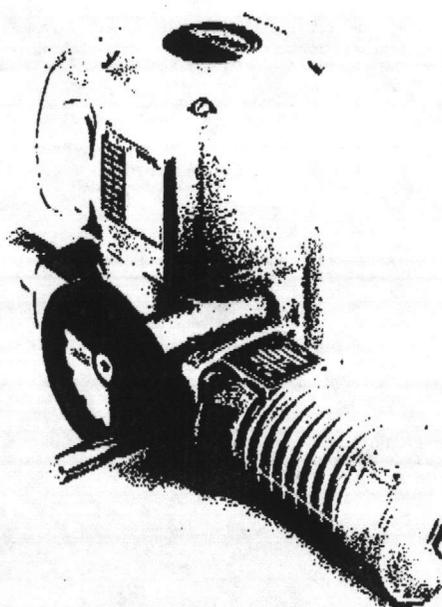
AUMA's quarter-turn SG series are completely self-contained, cost-effective actuators. Design compactness and a torque range of up to 880 ft-lbs make the SG series the most versatile actuators for use wherever quarter-turn actuation is required.

By adapting the features of larger, multi-turn actuators, AUMA has created a quarter-turn series specifically designed to meet the requirements of engineered specifications. With the development of the SG series, industries such as water and waste water, power, pulp and paper, chemical, and petroleum now have access to actuators which fully meet the broadest range of requirements.

## Valve Compatibility

Designed for compatibility with the widest range of applications, SG actuators are particularly well suited to the accurate seating requirements of ball valves and high performance butterfly valves.

The design integrity of the SG series also makes it the most reliable actuator selection for louver and butterfly damper applications where exposure to extreme atmospheric conditions, dirt and inaccessibility are key factors.



*AUMA's quarter turn series . . . combining the features of larger, multi-turn actuators.*

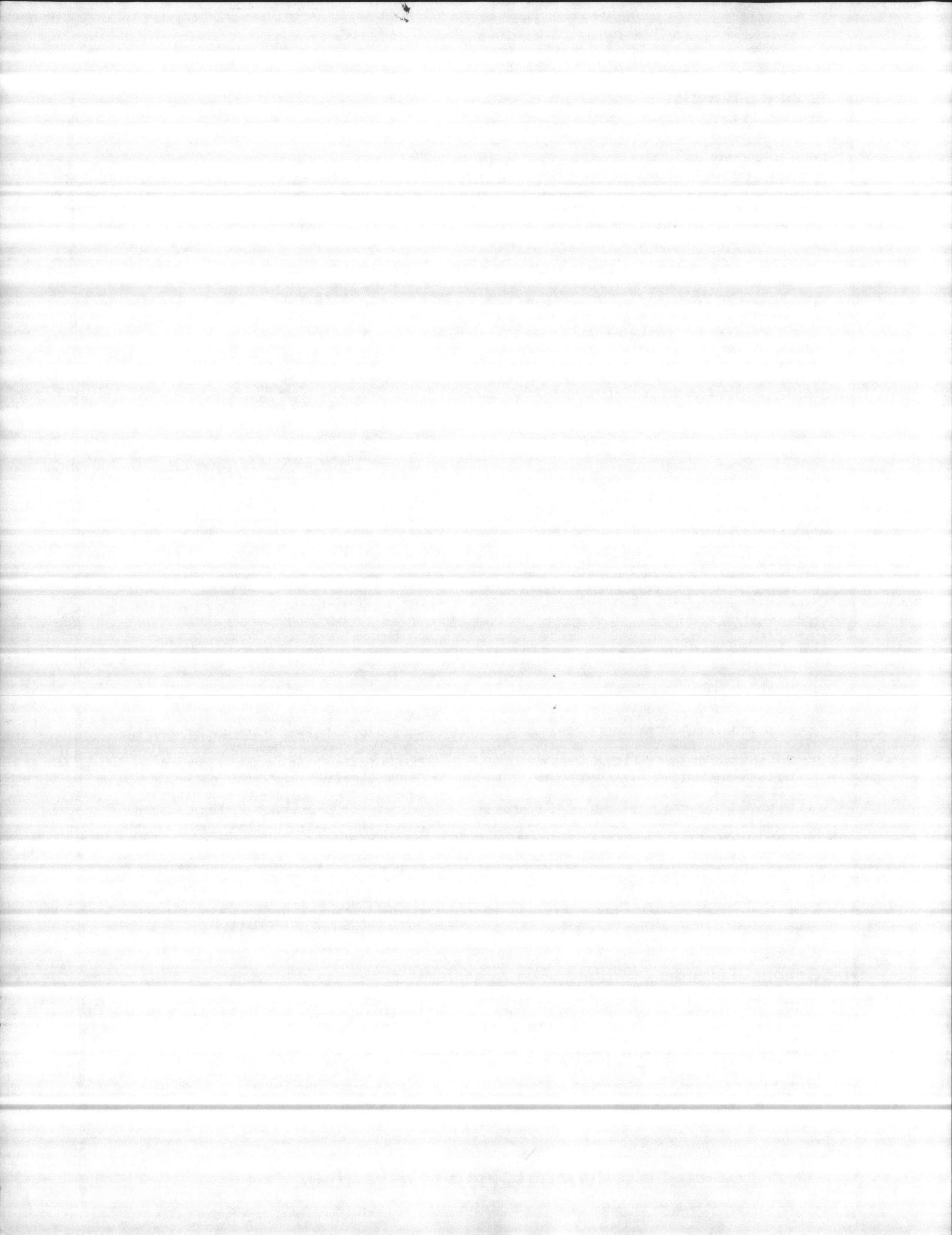
## Product Features

- Open and close torque switches.
- Open and close limit switches (counter gear driven, in step at all times).
- End-of-travel mechanical stops which are precisely adjustable from 80 degrees to 120 degrees.
- Handwheel requiring no more than 40 pounds of rim pull.
- Two sets of normally open and two sets of normally closed contacts in each limit switch for control and indication.
- NEMA 4 completely water tight enclosure.
- Self-locking worm gears to prevent valve creeping and to hold valves in any given position . . . open, closed, or intermediate.
- Plug-and-socket type electrical connections.
- Continuous reading mechanical dial indicator.
- Separate splined coupling for mounting the actuator to a valve at any 90 degree position.
- Special severe duty motors designed by AUMA specifically for valve actuator service.
- Totally enclosed, non-ventilated motor housing.
- Class F, tropicalized motor insulation.
- Thermal switches embedded in motor windings to protect against overheating.
- Space heater in switch compartment.

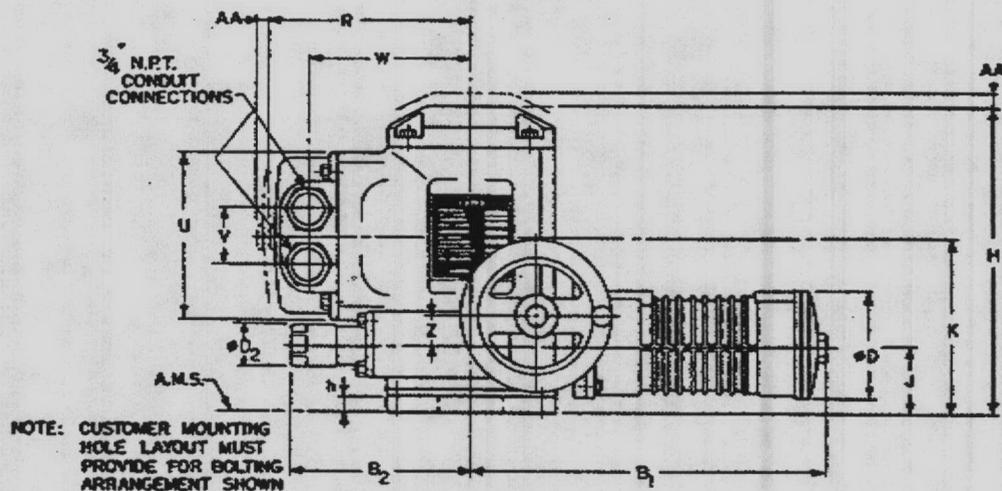
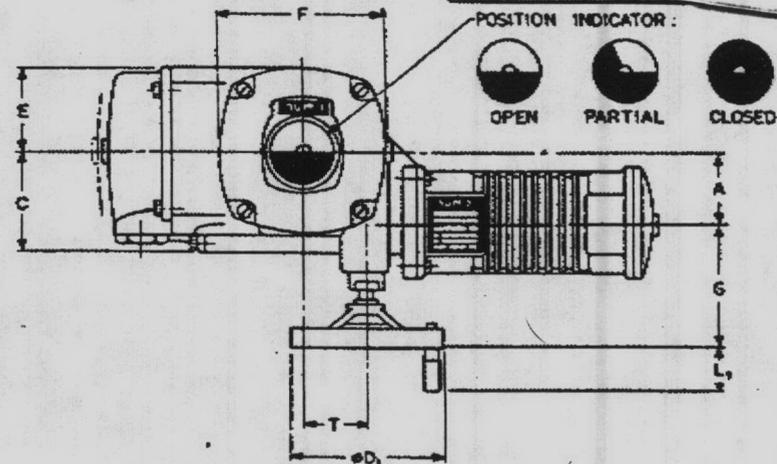
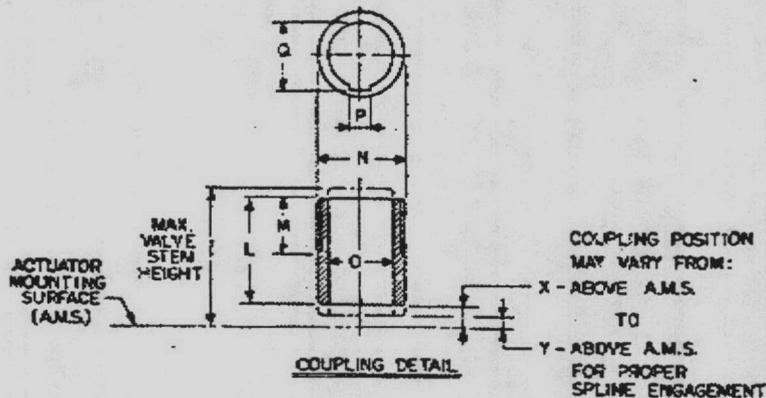
## Optional Features

- Four train geared limit switches for additional position indication, sequencing and other controls. (SG 10 and SG 12 only).
- Single or dual potentiometer for remote position indication (4.7 K ohm, 1.0 K ohm).
- Electronic position transmitter with 0-20MA, 4-20MA, or 0-5VDC signal.
- Integral controls such as reversing starters, transformers, push buttons, selector switch, or lights. (SG 10 and SG 12 only).
- Special lubricants for high or low temperature operating environments. Available only as three phase without integral controls (model SGH and SGL).

**AUMA ACTUATORS, INC.**



DIMENSIONS (INCHES)			
	SG05	SG10	SG12
A	1.6	2.5	3.2
B <sub>1</sub> max.	11.9	12.3	12.3
B <sub>2</sub>	5.4	6.7	7.7
C	3.5	4.6	5.2
D <sub>φ</sub> max.	4.0	4.0	4.0
D <sub>1</sub> φ	5.0	5.0	5.5
D <sub>2</sub>	1.6	1.6	1.6
E	2.3	3.0	3.0
F	4.6	5.9	5.9
G	3.5	4.0	4.4
H	10.8	11.2	12.2
J	2.3	2.4	3.0
K	7.0	6.9	8.0
L	1.6	2.6	3.0
L <sub>1</sub>	2.4	2.4	2.4
M	0.79	1.37	1.57
N	1.64	2.03	2.66
O max.	1.0		
P			
Q	1.12		
R	6.0	7.4	7.4
T	1.8	2.2	2.2
U	4.5	6.0	6.0
V	1.6	2.0	2.0
W	4.8	5.7	5.7
X	0.5	0.6	0.6
Y	0.2	0.1	0.1
Z	1.3	1.3	1.3
AA	1.2	1.2	1.2
AC	0.44	0.56	0.75
AD	3.75	5.32	6.50



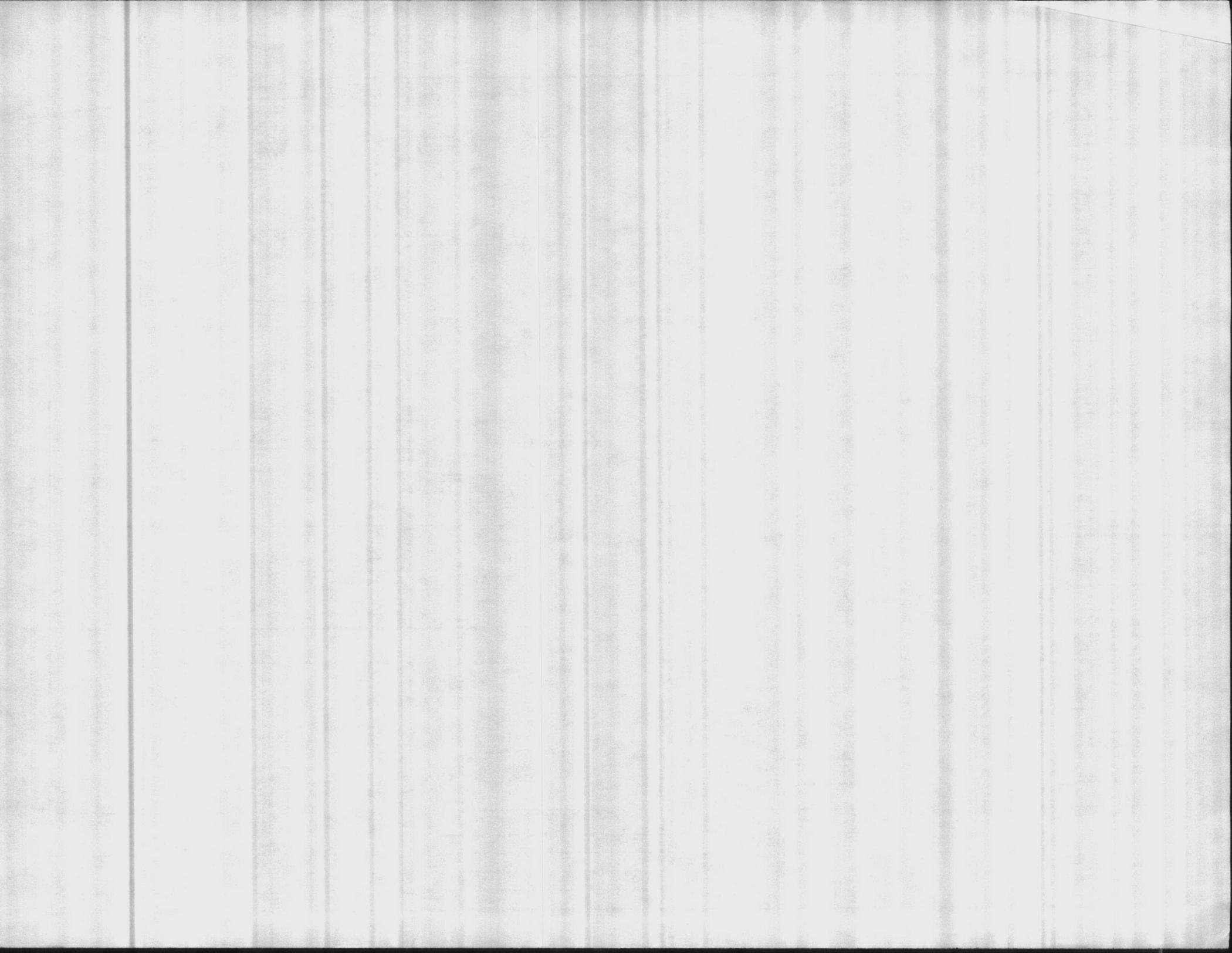
MOUNTING DIMENSIONS (INCHES)				
	SG05	SG07	SG10	SG12
d <sub>1</sub> φ	6.0	6.0	6.2	7.5
d <sub>2</sub> φ	1.69	1.69	2.13	2.75
d <sub>3</sub> φ				
d <sub>4</sub> unc				
h	0.63	0.63	0.63	0.75
h <sub>1</sub>	0.63	0.63	0.63	0.7
z max.	2.6	2.6	3.3	4.1

	RATED TORQUE FT-LBS.	WEIGHT-LBS.
SG05	110	40
SG07	220	40
SG10	440	50
SG12	880	64

φd<sub>3</sub> - D.B.C.  
φd<sub>4</sub> - THREAD SIZE  
h<sub>1</sub> - DEPTH

AC - D.C. BORE  
AD - D.B.C.

<b>auma</b>		<b>AUMA ACTUATORS, INC.</b>	
PITTSBURGH, PA. 15201			
FORM BY ATC	DATE 2/22/85	CHK BY	DATE
SG05-SG12 WITH UNIVERSAL FLANGE			
DIMENSIONAL DRAWING			
REV	DESCRIPTION	DATE	REFERENCE NO.
			ISSUE 2.84
			EQ. NO.



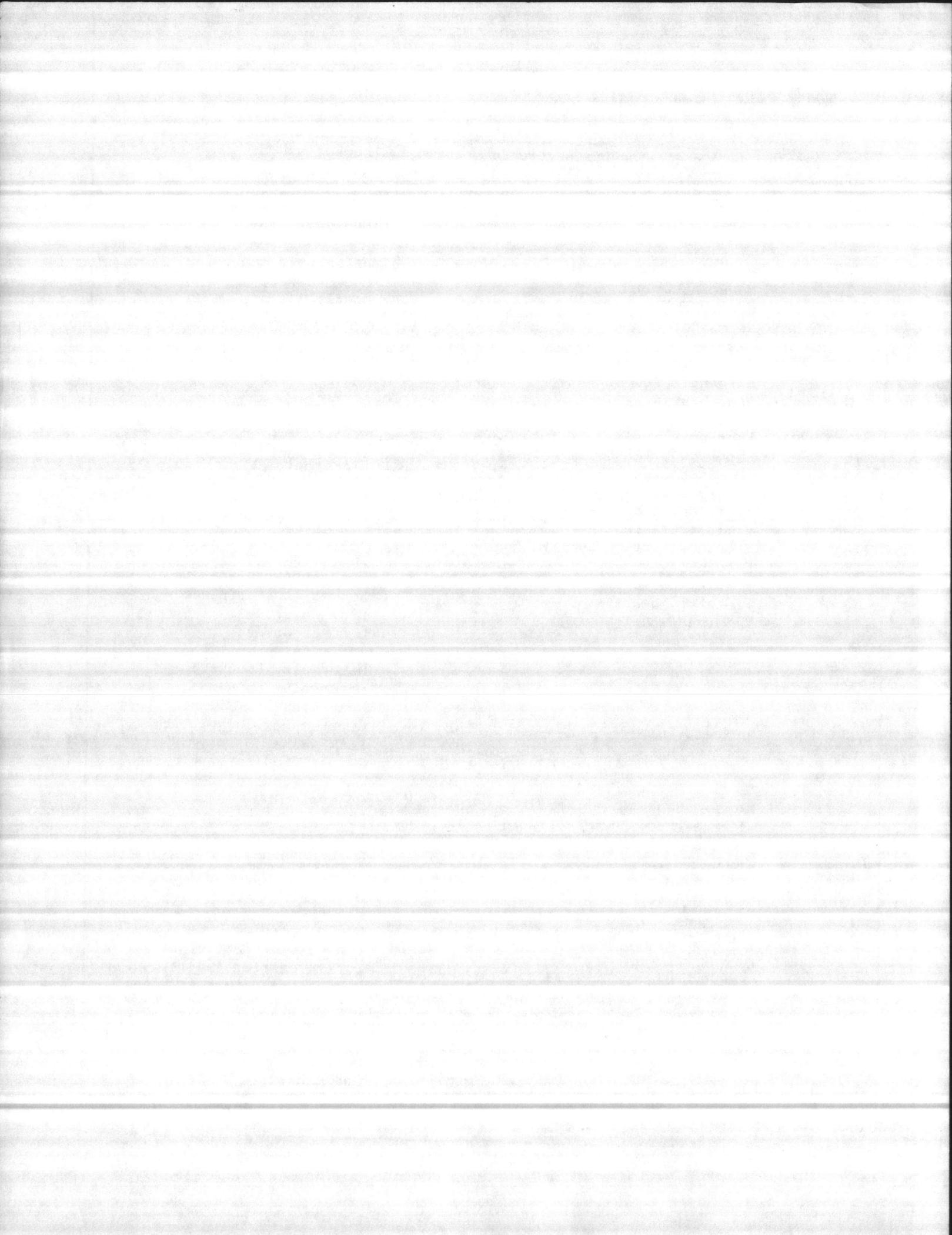
**auma****PARTS LIST SG 05 - SG 12**

When placing your order for parts, please state model number and S.O. number (refer to name plate).  
Part numbers written in brackets will be supplied as an assembly only.

Part No.	Designation	Part No.	Designation
1	Housing	038	Allen head cap screw
2	Mounting flange	039	Lock washer
3	Worm wheel	040	Handle
4	Worm shaft	1.42	Cover plate
5	Bearing lock-nut	1.55	Indicator disc
7	Travelling nut	1.72	Stud bolt
9	Retainer plate	2.01*	Potentiometer (state resistance required)
10	Stop housing		
14	Coupling	2.06*	Transducer - IWG (LVDT)
15	Stop nut	2.07*	Electronic - IWG
16	Cap	2.08*	Transducer-RWG (mylar pot.)
18	TS segment gear	2.09*	Electronic-RWG
19	Torque drive assembly	2.010*	Screw
21	Limit drive assembly	2.012*	Spacer
23	Limit drive gear	2.030	Limit switch (state 4 or 8 wire)
(28)	Handwheel worm assembly		
29	Retainer	2.0301	Torque switch
31	Insulation guard	3.1	Pin carrier plate
32	Planetary gearing	3.2	Socket carrier plate
33	Key (handwheel shaft)	3.6	Plug cover
34	Motor	3.7	Control cover
(36)	Control unit assembly	3.8	Indicator glass
49	Handwheel spacer	3.40	Motor plug (socket)
01	Hexhead bolt	3.41	Motor plug (pin)
02	Lock washer	3.01	Snap ring
03	Hexhead bolt	3.02	Captive hex. head bolt
04	Lock washer	3.03	Lock washer
05	O-ring (stop housing)	3.05	O-ring (indicator glass)
06	O-ring (worm wheel)	3.06	O-ring (control cover)
07	O-ring (mounting flange)	3.001	Control plug pin
08	O-ring (handwheel retainer)	(3.011)	Conduit entry adaptor
09	Grease seal (handwheel shaft)	3.025	Plug
010	Screw	3.026	O-ring (plug)
011	Lock washer	3.028	Screw
012	Ball bearing	3.029	Lock washer
013	Ball bearing	3.030	Pin carrier
014	Circlip	3.031	Socket carrier
015	Circlip	3.032	Pin carrier (additional)
018	Bushing	3.033	Socket carrier (additional)
020	Grub screw	32.09	O-ring (planetary gearing)
030	Grub screw	34.03	Hex head bolt
031	O-ring (cap)	34.04	Lock washer
032	Spacer	34.08	O-ring (motor)
033	Circlip	34.020	Washer
035	Handwheel	H 01	Space heater
036	Washer		
037	Screw		

\* Optional Equipment

Issue 1.84



ACTUATOR, ADVA